Chemistry I: Matter

Introduction

Chemistry is defined as_____

_____

General Types of Chemistry

Pure Chemistry - _____

_____

Applied Chemistry- _____

_____

Kinds of Chemistry:

Organic Chemistry is_____

_____

Inorganic Chemistry is_____

_____

Matter

Matter is _____

_____

Mass is_____

_____

Volume is _____

_____

Law of Conservation of Matter and Energy_____

_____

_____

_____

Properties of Matter

Properties are_____

_____

_____

Two types of Properties are:

Physical properties_____

_____

_____

Examples of physical properties are_____

_____

_____

Chemical Properties_____

_____

_____

Examples of chemical properties are_____

_____

_____

Classification of Matter

1. Mixture- _____

_____

a. Any substance that can be taken apart by _____

b. Two or more kinds of matter combined together where each kind of matter retains its _____properties.

2. Pure substance- any substance that cannot be taken apart by _____means (same stuff throughout)

3. Physical means – _____

_____

4. Homogeneous mixture (solution) _____

_____

5. Heterogeneous mixture _____

_____

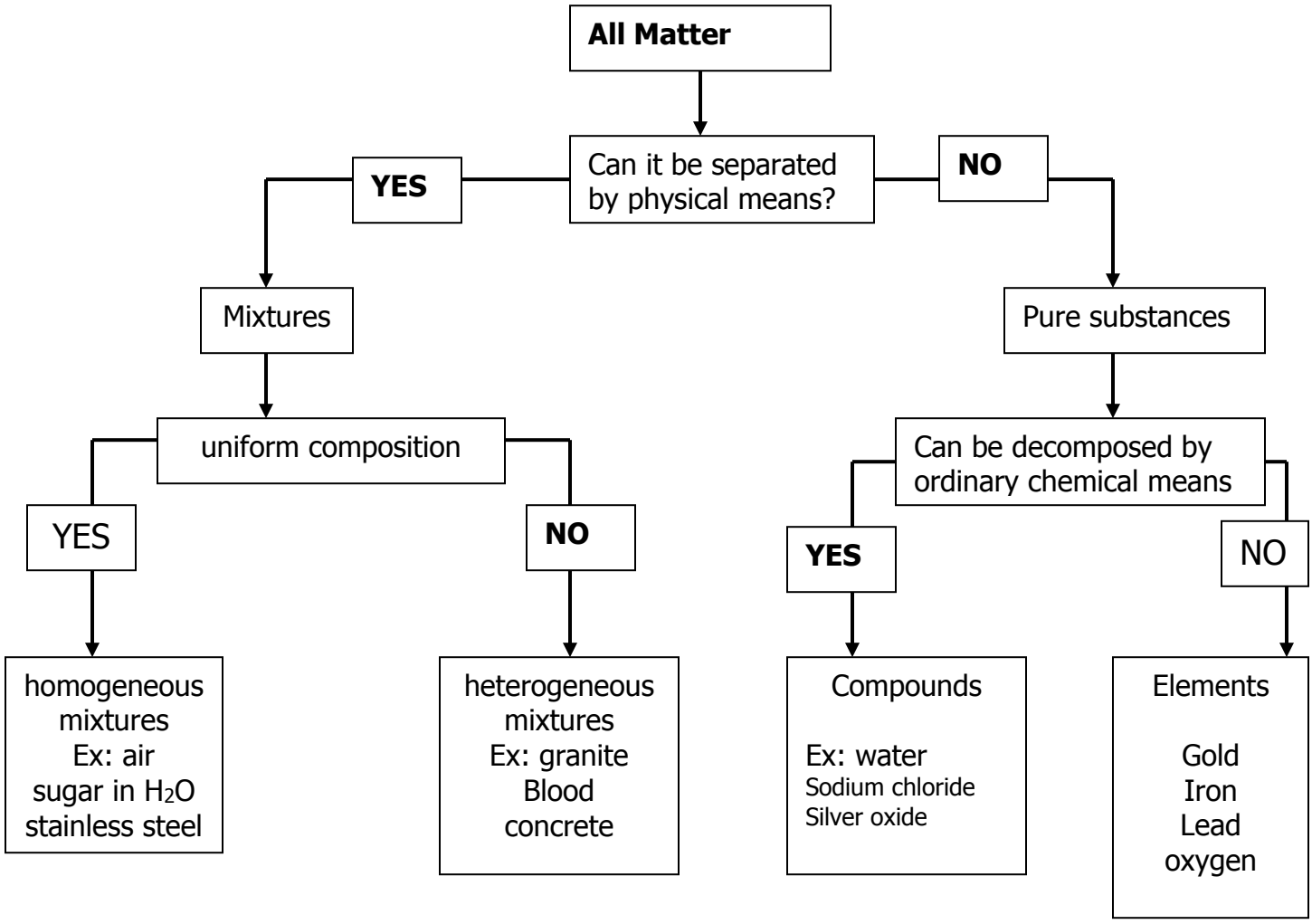
6. Compounds _____

_____

7. Elements- _____

_____

Classification of Matter



Changes in Matter

There are 2 general types:

1. Physical changes-_____

_____

2. Chemical changes-_____

_____

Now how do you tell the difference?

You pose the question:

Is a substance with completely different properties made doing this change?

If _____then a chemical change has occurred;

If _____then a physical change has occurred.

Examples:_____

_____

_____

Evidence of Chemical Changes

1._____
2._____
3._____
4._____
5._____
6._____

A precipitate is _____

Things that promote Chemical Change

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

A catalyst is _____

States of Matter

Solids	Liquids	Gases
Shape	Shape	Shape
Volume	Volume	Volume
Distance between particles	Distance between particles	Distance between particles
Other	Other	Other

The Modern Periodic Table

The known elements have been organized into a chart by _____

_____

_____

In 1951, _____ _____ was awarded the Nobel Prize in chemistry for his work on developing the Modern Periodic Table.

Element 106 has been named _____(Sg) in his honor.

Parts of the Periodic Table

Rows on the Periodic Table are called_____ or _____.

They are numbered_____.

The 112 elements can be divided into 9 separate families or groups.

The columns on the Periodic Table are called_____or_____.

The columns a numbered _____

The old system used Roman numerals and letters to denote groups and subgroups.

Metals

Elements in Groups _____and some under the stair step.

Non-Metals

Non-metals are the elements in Groups _____

The non-metals are in two states of matter at room temperature

1._____

2._____

Metalloids

- Metalloids are the elements found along _____

_____

_____

- This line is drawn from between _____and _____to the border between _____and_____.

▪Only exception to this is_____ which is considered to be an "other metal".

▪Metalloids have properties of both metals and non-metals.

▪Metalloids, such as_____ and_____, are semi-conductors. This property makes metalloids useful in computers and calculators

Noble Gases

The six Noble gases are found in Group _____

These elements are:_____

_____

The noble gases have great difficulty_____

Noble gases are the most_____

Classification of Elements

Metals	Nonmetals